5500 Shellmound Street, Emeryville, CA 94608-2411

Fax: 510-547-5043 Phone: 510-450-6000

March 20, 1995

Brian Oliva Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

ST10413

Re: Shell Service Station WIC #204-5508-2303 2800 Telegraph Avenue Oakland, California WA Job #81-0700-105

Dear Mr. Oliva:

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 2652.d. Included below are descriptions and results of activities performed in the first quarter 1995 and proposed work for the second quarter 1995.

First Quarter 1995 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths
 in all wells and collected ground water samples from wells S-5, S-7, S-8 and S-11.
 Well SR-1 is a ground water extraction well and is not sampled. BTS' report describing
 these activities and the analytic report for the ground water samples are included as
 Attachment A.
- Weiss Associates (WA) calculated ground water elevations and compiled the analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2).

Brian Oliva March 20, 1995



Anticipated Second Quarter 1995 Activities:

 WA will submit a report presenting the results of second quarter 1995 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a ground water elevation contour map.

2

Please call if you have any questions.

No. EG 1576
CERTIFIED
ENGINEERING
GEOLOGIST

ATE OF CALIFORNIA

Sincerely, Weiss Associates

Grady Glasser Technical Asst.

James W. Carmody, C.E.G. Senior Project Hydrogeologist

GSG/JWC:sms J:\SHELL\0700\QM\95Q1R.DOC

Attachments: A - Blaine Tech's Ground Water Monitoring Report

cc: Lynn Walker, Shell Oil Company, P.O. Box 4023, Concord, California 94524

Richard Hiett, Regional Water Quality Control Board - San Francisco Bay Region,

2101 Webster Street, Suite 500, Oakland, California 94612



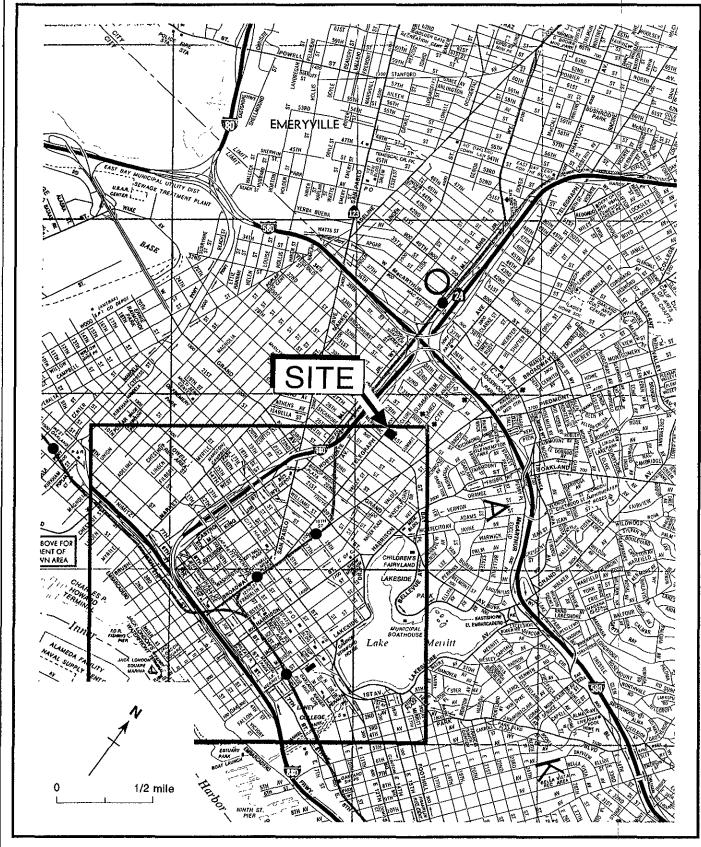


Figure 1. Site Location Map - Former Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California

Avenue, Oakland, California

56/67/60

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-1	05/04/92	35,31	9.50	25.81
.	08/10/92	55.57	10.85	24,46
	11/09/92		10.34	24.97
	02/22/93		7.60	27.71
	06/07/93		8.63	26.68
	08/13/93		9.20	26.11
	11/18/93		10.58	24.73
	02/10/94		8.41	26.90
	05/03/94		9.09	26.22
	08/01/94		8.81	26.50
	11/08/94		9.32	25.99
	02/03/95		6.98	28.33
	02100750		0,70	#0.00
S-2	05/04/92	33.91	9.44	24.47
	08/10/92		10.73	23.18
	11/09/92		10.29	23.62
	02/22/93 ^a		9.04	24.87
	25.04.102	22.5	0.00	
S-3	05/04/92	33.56	9.22	24.34
	08/10/92 ^b			444
S-4	05/04/92	34.08	9.96	24.12
	08/10/92		11.32	22,76
	11/09/92		11.29	22.79
	02/22/93		9.82	24.26
	06/07/93		10.51	23.57
	08/13/93		11.05	23.03
	11/18/93		11.34	22.74
	02/10/94		9.93	24.15
	05/03/94		10.40	23.68
	08/01/94		10.68	23.40
	11/08/94		9.44	24.47
	02/03/95		9.18	24,90
~ ~	A # 15 + 45 C			
S-5	05/04/92	33.42	10.27	23.15
	08/10/92		10.68	22.74
	11/09/92		10.69	22.73
	02/22/93		9.45	23.97
	06/07/93		10.23	23.19
	08/13/93		10.58	22.84
	11/18/93		10.70	22.72
	02/10/94		9.75	23.67
	05/03/94		10.19	23.23
	08/01/94		10.30	23.12
	11/08/94		9.64	23.78
	02/03/95		9.59	23.83

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-6	05/04/92	32.59	9.42	23.17
5 3	08/10/92	02.07	10.40	22.19
	11/09/92		10.16	22.43
	02/22/93		7.60	24.99
	06/07/93		8.90	23.69
	08/13/93		9.39	23.20
	11/18/93		10.32	22.27
	02/10/94		8.68	23.91
	05/03/94		9.20	23.39
	08/01/94		8.90	23.69
	11/08/94		8.32	24.27
	02/03/95		8.04	24.55
S-7	05/04/92	33.33	11.21	22.12
5-7	08/10/92	33.03	12.28	21.05
	11/09/92		11.77	21.56
	02/22/93		8.86	24.47
	06/07/93		10.58	22.75
	08/13/93		11.34	21.99
	11/18/93		12.00	21.33
	02/10/94		9.88	23.45
	05/03/94		10.75	22.58
	08/01/94	•	11.05	22.28
	11/08/94		9.64	23.89
	02/03/95		8.53	24.80
S-8	05/04/92	31.97	10.29	21.68
5 5	08/10/92	J.1.77	11.12	20.85
	11/09/92		10.71	21.26
	02/22/93		6.04	25.93
	06/07/93		10.06	21.91
	08/13/93		10.56	21.41
	11/18/93		10.90	21.07
	02/10/94		9.53	22.44
	05/03/94		10.06	21.91
	08/01/94		10.32	21.65
	11/08/94		9.25	22.72
	02/03/95		8.99	22.98
S-9	05/04/92	31.86	10.45	21.41
-	08/10/92		11.52	20.34
	11/09/92	•	11.02	20.84
	02/22/93		8.00	23.86
	06/07/93		10.07	21.79
	08/13/93		10.92	20.94
	11/18/93		11.19	20.67

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl
Well ID	Date	(It above msi)	(11)	Elevation (it adove his
	02/10/94		9.16	22.70
	05/03/94		10.03	21.83
	08/01/94		10.52	21.34
	11/08/94		9,08	22.78
	02/03/95		8.37	23.49
S-10	05/04/92	32.95	8.54	24.41
	08/10/92		10.43	22.52
	11/09/92		9.14	23.81
	02/22/93		6.72	26.23
	06/07/93		8.08	24.87
	08/13/93		8.83	24.12
	11/18/93		9.46	23.49
	02/10/94		7.41	25.54
	05/03/94		8.16	24.79
	08/01/94		8.29	24.66
	11/08/94		7.02	25.93
	02/03/95		6.79	26.16
S-11	05/04/92	30.78	9.99	20.79
	08/10/92		10.92	19.86
	11/09/92		10.44	20.34
	02/22/93		7.30	23.48
	06/07/93	•	9.51	21.27
	08/13/93		10.39	20.39
	11/18/93		10.64	20.14
	02/10/94		8.50	22.28
	05/03/94		9.42	21.36
	08/01/94		10.12	20.66
	11/08/94	•	8.84	21.94
	02/03/95		7.12	23.66
SR-1	05/04/92°		9.02	
	08/10/92		10.29	
	11/09/92		10.92	
	02/22/93		6.64	
	06/07/93		7.36	,
	08/13/93		7.96	,,, at 40
	11/18/93		10.02	
	02/10/94			
	05/03/94		8.28	
	08/01/94		7.98	
	11/08/94		7.75	
	02/03/95		7.20	



Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800
Telegraph Avenue, Oakland, California (continued)

Notes:

a = Destroyed on April 8, 1993 for onsite construction
b = Well inaccessible since August 1992
c = Top-of-Casing not surveyed

Oakland, California Well ID and Depth to Water TPH-G В Е Τ X Sampling Frequency Date (ft) -parts per billion (µg/L)-**WELLS** S-1 9.50 05/04/92 < 50 < 0.5 < 0.5 < 0.5 < 0.5 (Annually) < 50 < 0.5 08/10/92 10.85 < 0.5 < 0.5 < 0.5 11/09/92 10.34 3rd Quarter) < 50 < 0.5 < 0.5 < 0.5 < 0.5 02/23/93 7.60 < 50 < 0.5 < 0.5 < 0.5 < 0.5 06/07/93 8.63 0.7 < 50 2.8 1.3 3.0 08/13/93 9.20 < 50 < 0.5 < 0.5 < 0.5 < 0.5 10.58 < 0.5 11/18/93 < 50 < 0.5 < 0.5 < 0.5 02/10/94 < 50 < 0.5 8.41 < 0.5 < 0.5 < 0.5 05/03/94 9.09 < 50 < 0.5 < 0.5 < 0.5 < 0.5 08/01/94 8.81 < 50 < 0.5 < 0.5 < 0.5 < 0.5 S-2 05/04/92 9.44 1,600 190 240 6 54 08/10/92 10.73 < 50 4.1 < 0.5 < 0.5 < 0.5 09/11/92 10.29 84 19 2.2 0.7 4.3 02/23/93 9.04 1,600 1,800 16,000 850 480 06/07/93 Well destroyed S-3 05/04/92 9.22 08/10/92 S-4 05/04/92 9.96 < 50 < 0.5 < 0.5 < 0.5 < 0.5 08/10/92 (Annually < 50 < 0.5 < 0.5 11.32 < 0.5 < 0.5 3rd Quarter) 11/09/92 11.29 < 0.5 < 50 < 0.5 < 0.5 < 0.5 02/23/93 9.82 < 50 _<0.5 < 0.5 < 0.5 < 0.5 06/07/93 10.51 50 9.2 3.3 5.5 14 08/13/93 11.05 < 50 < 0.5 < 0.5 < 0.5 < 0.5

Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2303, 2800 Telegraph Avenue,

Table 2.



⁻ Table 2 continues on next page -

Welss Associates

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2303, 2800 Telegraph Ave., Oakland, California (continued)

Well ID and Sampling		Depth to Water	ТРН-G	В	E	T	X			
Frequency	Date	(ft)								
	11/18/93	11.34	<50	<0.5	<0.5	<0.5	<0.5			
	02/10/94	9.93	<50	< 0.5	< 0.5	< 0.5	< 0.5			
	05/03/94	10.40	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/01/94	10.68	<50	< 0.5	< 0.5	<0.5	< 0.5			
S-5	05/04/92	10.27	< 50	< 0.5	< 0.5	<0.5	< 0.5			
(Bi-Annually	08/10/92	10.68	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
1st & 3rd Qtrs)	11/09/92	10.69	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	02/23/93	9.45	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	06/07/93	10.23	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/13/93	10.58	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	11/18/93	10.70	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	02/10/94	9.75	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	05/03/94	10.19	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/01/94	10.30	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	02/03/95	9.59	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
S-6	05/04/92	9.42	3,100	640	23	22	97			
(Annually	08/10/92 ⁻	10.40	3,400	430	26	27	120			
3rd Quarter)	11/09/92	10.16	2,000	320	15	15	100			
	02/23/93	7.60	14,000	780	380	180	1,300			
	06/07/93	8.90	3,900	1,400	83	56	210			
	08/13/93	9.39	4,000 ^b	890	< 0.5	16	41			
	11/18/93	10.32	80	5.0	< 0.5	< 0.5	< 0.5			
	02/10/94	8.68	4,100	370	21	23	90			
	05/03/94	9.20	4,700	550	85	28	340			
	08/01/94	8.90	2,900	370	-11-	11	43			
	08/01/94 ^{dup}	8.90	2,600	340	7.7	8.8	33			

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2303, 2800 Telegraph Ave., Oakland, California (continued)

Well ID and Sampling		Depth to Water	TPH-G	В	E	Т	X		
Frequency	Date	(ft)	parts per billion (μg/L)						
S-7	05/04/92	11.21	180	1.6	1.5	< 0.5	3		
(Bi-Annually	08/10/92	12.28	190	8	4.7	1.4	8.5		
1st & 3rd Qtrs)	11/09/92	11.77	280	16	7.8	4	21		
	02/23/93	8.86	210	13	5.4	2.2	12		
	06/07/93	10.58	90	1.2	1.0	2.5	< 0.5		
	08/13/93	11.34	140	4.0	< 0.5	0.8	0.5		
	11/18/93	12.00	440	43	0.9	4.9	4.2		
	02/10/94	9.88	250 ^b	< 0.5	1.8	< 0.5	< 0.5		
	05/03/94	10.75	130	< 0.5	< 0.5	< 0.5	< 0.5		
	08/01/94	11.05	250	4.8	< 0.5	< 0.5	< 0.5		
	02/03/95	8.53	< 50	< 0.5	< 0.5	< 0.5	< 0.5		
S-8	05/05/92	10.29	1,600	20	96	420	330		
(Quarterly)	08/10/92	11.12	1,500	19	60	37	250		
	11/09/92	10.71	710	5.7	28	24	120		
	02/23/93	6.04	3,800	40	68	54	260		
	06/07/93	10.06	1,200	13	65	19	150		
	08/13/93	10.56	1,300	21	49	23	250		
	11/18/93	10.90	870	16	59	5.3	230		
	02/10/94	9.53	2,400	11	120	55	530		
	02/10/94 ^{dup}	9.53	2,400	11	100	46	440		
	05/03/94	10.06	3,100	12	130	27	370		
	05/03/94 ^{dup}	10.06	3,000	21	120	25	340		
	08/01/94	10.32	1,500	20	39	18	190		
	11/08/94	9.25	2,100	22	73	38	390		
	11/08/94 ^{dup}	9.25	2,100	20	75	31	390		
_	02/03/95	8.99	4,8 00	6 7	130	39	300		
	$02/03/95^{\rm dup}$	8.99	3,700	53	100	30	240		



Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2303, 2800 Telegraph Ave., Oakland, California (continued)

Well ID and Sampling		Depth to Water	TPH-G	В	E	Т	Х			
Frequency	Date	(ft)	parts per billion (μg/L)							
S -9	05/05/92	10.45	<50	<0.5	<0.5	<0.5	<0.5			
(Annually	08/10/92	11.52	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
3rd Quarter)	11/09/92	11.02	< 50	< 0.5	< 0.5	< 0.5	0.7			
,	02/23/92	8.00	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	06/07/93	10.07	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/13/93	10.92	140°	< 0.5	< 0.5	< 0.5	< 0.5			
	11/18/93	11.19	170	< 0.5	<0.5	< 0.5	< 0.5			
	02/10/94	9.16	140°	< 0.5	< 0.5	< 0.5	< 0.5			
	05/03/94	10.03	<50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/01/94	10.52	< 50	<0.5	<0.5	< 0.5	< 0.5			
S-10	05/05/92	8.54	<50	< 0.5	< 0.5	< 0.5	< 0.5			
(Annually	08/10/92	10.43	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
3rd Quarter)	11/09/92	9.14	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
,	02/22/93	6.72	< 50	< 0.5	< 0.5	< 0.5	<0.5			
	06/07/93	8.08	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/13/93	8.83	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	11/18/93	9.46	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	02/10/94	7.41	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	05/03/94	8.16	< 50	< 0.5	< 0.5	< 0.5	< 0.5			
	08/01/94	8.29	< 50	< 0.5	<0.5	< 0.5	< 0.5			
S-11	05/04/92	9.99	1,500	55	57	32	190			
(Quarterly)	08/10/92	10.92	750	29	43	13	120			
	11/09/92	10.44	4,100	32	120	62	1,100			
	02/23/93	7.30	760	15	37	13	140			
	06/07/93	9.51	1,700	40_	1 00	16	360			
	06/07/93 ^{dup}	9.51	1,600	51	83	16	300			
	08/13/93	10.39	60	0.9	0.8	< 0.5	1.2			

[—] Table 2 continues on next page —



Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2303, 2800 Telegraph Ave., Oakland, California (continued)

Well ID and		Depth to Water	TPH-G	В	E	T	X
Sampling Frequency	Date	(ft)		—————pai	rts per billion (µg/L)		
	08/13/93 ^{dup}	10.39	70	2.1	0.9	<0.5	2.1
	11/18/93	10.64	150	7.8	9.0	1.0	12
	02/10/94	8.50	4,400	53	160	19	390
	05/03/94	9.42	65	1.5	0.53	< 0.5	0.59
	08/01/94	10.12	240	18	6.9	6.7	18
	11/08/94	8.84	490	14	15	5.2	47
	02/03/95	7.12	380	4.1	1.4	0.9	5.1
SR-1	11/18/93	10.02	< 50	<0.5	< 0.5	< 0.5	< 0.5
	11/18/93 ^{dup}	10.02	< 50	< 0.5	< 0.5	< 0.5	< 0.5
Trip	06/04/93		< 50	< 0.5	< 0.5	< 0.5	< 0.5
Blank	08/13/93		< 50	< 0.5	< 0.5	< 0.5	< 0.5
	11/18/93		< 50	< 0.5	< 0.5	< 0.5	< 0.5
	02/10/94		<50	< 0.5	< 0.5	< 0.5	< 0.5
	05/03/94		< 50	< 0.5	< 0.5	< 0.5	< 0.5
	08/01/94		< 50	< 0.5	< 0.5	< 0.5	< 0.5
	11/08/94		< 50	< 0.5	< 0.5	< 0.5	< 0.5
	02/03/95		< 50	< 0.5	< 0.5	1.0	< 0.5
DTSC MCLs			NE	1.0	680	100°	1,750

Associates

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2303, 2800 Telegraph Ave., Oakland, California (continued)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015

B = Benzene by EPA Method 8020

E = Ethylbenzene by EPA Method 8020

T = Toluene by EPA Method 8020

X = Xylenes by EPA Method 8020

--- = Not analyzed

DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water

NE = Not established

< n = Not detected at detection limits of n ppb

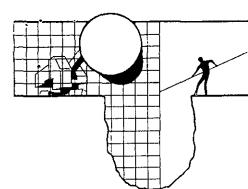
dup = Duplicate sample

Notes:

- a = Well paved over, inaccessible since August, 1992.
- b = The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- c = The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline.
- d = DTSC recommended action level for drinking water; MCL not established

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE SAN JOSE, CA 95133 (408) 995-5535 FAX (408) 293-8773

February 20, 1995

Shell Oil Company P.O. Box 4023 Concord, CA 94524

Attn: Lynn Walker

SITE: Shell WIC #204-5508-2303 2800 Telegraph Avenue Oakland, California

QUARTER: 1st quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950203-F-4

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be removed in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #178.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lp

attachments: table of well gauging data

chain of custody

certified analytical report

cc: Weiss Associates

5500 Shellmound Street

SEmeryville, CA 94608-2411

ATTN: Michael Asport

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ)	THICKNESS OF IMMISCIBLES LIQUID ZONE	VOLUME OF IMMISCIBLES REMOVED	DEPTH TO WATER	DEPTH TO WELL BOTTOM
			(sheen)	(feet)	(feet)	(ml)	(feel)	(feet)
	•							
S-1	2/3/95	TOB	-	NONE	-	_	6.98	27.80
S-4	2/3/95	TOB	-	NONE		_	9.18	30.35
S-5	2/3/95	TOB	-	NONE		_	9.59	30.57
S-6	2/3/95	TOB	_	NONE	-	-	8.04	22.16
S-7	2/3/95	TOB	_	NONE	-	-	8.53	30.80
S-8 *	2/3/95	TOB	ODOR	NONE		_	8.99	19.13
S-9	2/3/95	TOB		NONE		_ ´	8.37	30.18
S-10	2/3/95	TOB	-	NONE	-	-	6.79	24.25
S-11	2/3/95	TOB	ODOR	NONE	_	-	7.12	19.12
SR-1	2/3/95	TOB		NONE		_	7.20	34.41

^{*} Sample DUP was a duplicate sample taken from well \$-8.

SHELL OIL COMPANY CHAIN OF CUSTODY RECORD Sodal No: 954203 F4 Dale: RETAIL ENVIRONMENTAL ENGINEERING - WEST Page (ol /. Sile Address: LAB: <u>NETPACIFIC</u> 2800 Telegraph Ave., Oakland Analysis Required WIC#: 204-5508-2303 CHECK OHE (I) TOX OHLY CIVE TURN AROUND TIME IN IX Quarterly Mantering Phone No.: (510) 575-6169 Fax #: 675-6172 Shell Engineer: 24 hours 🗍 Lynn Walker notionite value 12 44 hours | 8020 Consullant Name & Address:
Blaine Tech Services, Inc.
985 Timothy Drive San Jose, CA 95133 Soil Cloudy/Disposal ∏ suı 16 days X (Hormal) BIEX 40 C HU 8240) Clouby/Disposal Consultant Contact: Phone No.: (408) PH (EPA 8015 Mod. Diesel) 995-5535 Fax #: 293-8773 Sol/Ale Rome or Sys. ☐ 6462 Jim Keller 엉 V OA MAO nd (EPA Combination TPH 8015 HOTE: Holly Lob ou Woles Rem, or Sys. soon as Poulble of Commonis: [] KW OAM 24/41 hm. 1AT. Volaille Organics Preparation Used Olher Test for Disposal Y/N Sampled by: 8015 Container Size Composite SAMPLE .. Asbestos Printed Name: MATERIAL CONDITION/ DESCRIPTION Sample ID No. of **COMMENTS** Sludge Soli Woler Alr conts. 1458 1525 1611 1552 1509 LAB 2 Relinguished By (signature): Printed Name: Rogerragitalanatura): Printed Name: Date: Tom F/60 Time: 1/2:1.5 Kollphykhod by (signature): Pripios Namo: (Roggit of (signature): Printed Name: Date: '2 IT KUMBU Ilme: 1630 Time: 12 Relinguished By (signature): Printed Name: Pitaled Nome: Dale: 0 Ilmo:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



Santa Rosa Division 435 Tesconi Circle Santa Rosa, CA 95401

Tel: (707) 526-7200 Fax: (707) 526-9623

Jim Keller Blaine Tech Services 985 Timothy Dr. San Jose, CA 95133 Date: 02/15/1995

NET Client Acct. No: 1821 NET Pacific Job No: 95,00552

Received: 02/06/1995

Client Reference Information

Shell 2800 Telegraph Ave., Oakland/950203-F4

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Thomas F. Cullen, Jr.

Division Manager

Judy Ridley

Project Coordinator

Enclosure(s)





Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 2

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

SAMPLE DESCRIPTION: S-5

Date Taken: 02/03/1995
Time Taken: 14:58
ET Sample No: 235354

NET Sample No: 235354							
		Reporting	i		Date	Date	Batch
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)							
METHOD 5030/M8015						02/10/1995	2571
DILUTION FACTOR*	1					02/10/1995	2571
as Gasoline	ND	50	ug/L	5030		02/10/1995	2571
Carbon Range:						02/10/1995	2571
METHOD 8020 (GC, Liquid)						02/10/1995	2571
Benzene	ND	0.5	ug/L	8020		02/10/1995	2571
Toluene	ND	0.5	ug/L	8020		02/10/1995	2571
Ethylbenzene	ND	0.5	ug/L	8020		02/10/1995	2571
Xylenes (Total)	ND	0.5	ug/L	8020		02/10/1995	2571
SURROGATE RESULTS	* -					02/10/1995	2571
Bromofluorobenzene (SURR)	90		% Rec.	5030		02/10/1995	2571



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 3

Ref Shell 2800 Telegraph Ave., Oakland/950203-F4

SAMPLE DESCRIPTION: S-7

Date Taken: 02/03/1995

Time Taken: 15:25 NET Sample No: 235355

NET Sample No: 235355	NET Sample No: 235355							Run
			Reporting			Date	Date	Batch
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015							02/10/1995	2571
DILUTION FACTOR*	1						02/10/1995	2571
as Gasoline	ND		50	ug/L	50 30		02/10/1995	2571
Carbon Range:							02/10/1995	2571
METHOD 8020 (GC, Liquid)							02/10/1995	2571
Benzene	ND		0.5	ug/L	8020		02/10/1995	2571
Toluene	ND		0.5	ug/L	8020		02/10/1995	2571
Ethylbenzene	ND		0.5	ug/L	8020		02/10/1995	2571
Xylenes (Total)	ND		0.5	ug/L	8020		02/10/1995	2571
SURROGATE RESULTS							02/10/1995	2571
Bromofluorobenzene (SURR)	91			% Rec.	5030		02/10/1995	2571



Client Acct: 1821 NET Job No: 95,00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 4

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

SAMPLE DESCRIPTION: S-8

Date Taken: 02/03/1995 Time Taken: 16:11 NET Sample No: 235356

NET Sample No: 235356							Run
		Reportin	j ā		Date	Date	Batch
Parameter	Results Fl	ags Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)							
METHOD 5030/M8015						02/10/1995	2571
DILUTION FACTOR*	10					02/10/1995	2571
as Gasoline	4,800	500	ug/L	5030		02/10/1995	2571
Carbon Range:	C5-C12					02/10/1995	2571
METHOD 8020 (GC, Liquid)	*-					02/10/1995	2571
Benzene	67	5	ug/L	8020		02/10/1995	2571
Toluene	39	5	ug/L	8020		02/10/1995	2571
Ethylbenzene	130	5	ug/L	8020		02/10/1995	2571
Xylenes (Total)	300	5	ug/L	8020		02/10/1995	2571
SURROGATE RESULTS	~-					02/10/1995	2571
Bromofluorobenzene (SURR)	114		% Rec.	5030		02/10/1995	2571



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 5

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

SAMPLE DESCRIPTION: S-11

Date Taken: 02/03/1995
Time Taken: 15:52
NET Sample No: 235357

NET Sample No: 235357								Run
			Reportin	Reporting			Date	Batch
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015							02/10/1995	2571
DILUTION FACTOR*	1						02/10/1999	2571
as Gasoline	380		50	ug/L	5030		02/10/199	2571
Carbon Range:	C5~C12						02/10/1999	2571
METHOD 8020 (GC, Liquid)							02/10/199	2571
Benzene	4.1		0.5	ug/L	8020		02/10/199	2571
Toluene	0.9		0.5	ug/L	8020		02/10/199	2571
Ethylbenzene	1.4		0.5	ug/L	8020		02/10/199	2571
Xylenes (Total)	5.1		0.5	ug/L	8020		02/10/199	2571
SURROGATE RESULTS							02/10/199	2571
Bromofluorobenzene (SURR)	93			% Rec.	5030		02/10/199	2571



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 6

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

95

SAMPLE DESCRIPTION: DUP

Date Taken: 02/03/1995

Time Taken:

Bromofluorobenzene (SURR)

NET Sample No: 235358 Run Reporting Date Batch Date Parameter Results Flags Limit Method Extracted Analyzed No. TPH (Gas/BTXE, Liquid) METHOD 5030/M8015 02/10/199\$ 2571 --DILUTION FACTOR* ı 02/10/1995 2571 3,700 50 5030 02/10/1995 2571 as Gasoline ug/L Carbon Range: C5-C14 02/10/1995 2571 METHOD 8020 (GC, Liquid) 02/10/1995 2571 FC 53 0.5 ug/L 8020 02/11/1995 2575 Benzene 02/10/1995 2571 Toluene 30 0.5 ug/L 8020 FC0.5 ug/L 8020 02/11/1995 2575 Ethylbenzene 100 Xylenes (Total) 240 FC0.5 ug/L 8020 02/11/1995 2575 SURROGATE RESULTS 02/10/1995 2571

% Rec.

5030

02/11/1995 2575

FC : Compound quantitated at a 10% dilution factor.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Acct: 1821 NET Job No: 95.00552 Date· 02/15/1995

ELAP Cert: 1386 Page: 7

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

SAMPLE DESCRIPTION: EB

Date Taken: 02/03/1995
Time Taken: 15:09

NET Sample No: 235359							Run	
			Reporting			Date	Date	Batch
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE,Liquid)								ı
METHOD 5030/M8015							02/10/1995	2571
DILUTION FACTOR*	1						02/10/1995	2571
as Gasoline	ND		50	ug/L	5030	•	02/10/1995	2571
Carbon Range:							02/10/1995	2571
METHOD 8020 (GC, Liquid)							02/10/1995	2571
Benzene	ND		0.5	ug/L	8020		02/10/199\$	2571
Toluene	ND		0.5	ug/L	8020		02/10/1995	2571
Ethylbenzene	ND		0.5	ug/L	8020		02/10/1995	2571
Xylenes (Total)	ND		0.5	ug/L	8020		02/10/199\$	2571
SURROGATE RESULTS							02/10/1995	2571
Bromofluorobenzene (SURR)	85			% Rec.	5030		02/10/1995	2571



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 8

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

SAMPLE DESCRIPTION: TB

Date Taken: 02/03/1995

Time Taken:

NET Sample No: 235360								Run
			Reporting	3		Date	Date	Batch
Parameter	Results	Flags	<u>Limit</u>	Units	Met.hod	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015							02/10/1995	2571
DILUTION FACTOR*	1						02/10/1995	2571
as Gasoline	ND		50	ug/L	5030		02/10/1995	2571
Carbon Range:							02/10/1995	2571
METHOD 8020 (GC, Liquid)							02/10/1995	2571
Benzene	ND		0.5	ug/L	8020		02/10/1995	2571
Toluene	1.0	C	0.5	ug/L	8020		02/10/1995	2571
Ethylbenzene	ИD		0.5	ug/L	8020		02/10/1995	2571
Xylenes (Total)	ND		0.5	ug/L	8020		02/10/1995	2571
SURROGATE RESULTS							02/10/1995	2571
Bromofluorobenzene (SURR)	95			% Rec.	5030		02/10/1995	2571

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

 $[\]ensuremath{\mathtt{C}}$: Positive result confirmed by secondary column or GC/MS analysis.



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 9

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCA	CCA				
	CCV	Standard	Standard				Run
	Standard	Amount	Amount		Date	Analyst	Batch
Parameter	% Recovery	Found	Expected	Units	Analyzed	<u>Initials</u>	Number
TPH (Gas/BTXE, Liquid)						i	
as Gasoline	108.0	1.08	1.00	mg/L	02/10/1995	dfw	2571
Benzene	91.8	4.59	5.00	ug/L	02/10/1995	dfw	2571
Toluene	90.4	4.52	5.00	ug/L	02/10/1995	dfw	2571
Ethylbenzene	93.6	4.68	5.00	ug/L	02/10/1995	dfw	2571
Xylenes (Total)	93.3	14.0	15.0	ug/L	02/10/1995	dfw	2571
Bromofluorobenzene (SURR)	91.0	91	100	% Rec.	02/10/1995	dfw	2571
TPH (Gas/BTXE, Liquid)							
as Gasoline	108.0	1.08	1.00	mg/L	02/11/1995	dfw	2575
Benzene	91.8	4.59	5.00	ug/L	02/11/1995	dfw	2575
Toluene	89.6	4.49	5.00	ug/L	02/11/1995	dfw	2575
Ethylbenzene	92.6	4.63	5.00	ug/L	02/11/1995	dfw	2575
Xylenes (Total)	92.0	13.8	15.0	ug/L	02/11/1995	dfw	2575
Bromofluorobenzene (SURR)	96.0	96	100	% Rec.	02/11/1995	dfw	2575



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 10

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

METHOD BLANK REPORT

	Method						
	Blank					Run	
	Amount	Reporting		Date	Analyst	Batch	
Parameter	Found	Limit	Units	Analyzed	Initials	Number	
TPH (Gas/BTXE, Liquid)							
as Gasoline	ND	0.05	mg/L	02/10/1995	dfw	2571	
Benzene	ND	0.5	ug/L	02/10/1995	dfw	2571	
Toluene	ND	0.5	ug/L	02/10/1995	dfw	2571	
Ethylbenzene	ND	0.5	ug/L	02/10/1995	dfw	2571	
Xylenes (Total)	ND	0,5	ug/L	02/10/1995	dfw	2571	
Bromofluorobenzene (SURR)	89		% Rec.	02/10/1995	dfw	2571	
TPH (Gas/BTXE, Liquid)				•			
as Gasoline	ND	0,05	mg/L	02/11/1995	dfw	2575	
Benzene	ND	0.5	ug/L	02/11/1995	dfw	2575	
Toluene	ND	0.5	ug/L	02/11/1995	dfw	2575	
Ethylbenzene	ND	0.5	ug/L	02/11/1995	dfw	2575	
Xylenes (Total)	ND	0,5	ug/L	02/11/1995	dfw	2575	
Bromofluorobenzene (SURR)	93		% Rec.	02/11/1995	dfw	2575	



Client Acct: 1821 NET Job No: 95.00552 Date: 02/15/1995

ELAP Cert: 1386 Page: 11

Ref: Shell 2800 Telegraph Ave., Oakland/950203-F4

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

		Matrix				Matrix					
	Matrix	Spike				Matrix	Spike				
	Spike	Dup		Spike	Sample	Spike	Dup.		Date	Run	Sample
Parameter	% Rec.	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Units	Analyzed	Batch	Spiked
TPH (Gas/BTXE, Liquid)									1		235352
as Gasoline	106.0	104,0	1.9	1.00	ND	1.06	1.04	mg/L	02/10/1995	2571	235352
Benzene	96.3	97.4	1.1	19.1	ND	18.4	18.6	ug/L	02/10/1995	2571	235352
Toluene	97.3	98.2	0.9	78.7	0.9	77.5	78.2	ug/L	02/10/1995	2571	235352
TPH (Gas/BTXE, Liquid)											235400
as Gasoline	101.0	103.0	2.0	1.00	ND	1.01	1.03	mg/L	02/11/1995	2575	235400
Benzene	90.4	91.9	1.6	19.7	ND	17.8	18.1	ug/L	02/11/1995	2575	235400
Toluene	91.4	89.9	1.7	82.1	ND	75.0	73.8	ug/L	02/11/1995	2575	235400



KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results	column indicates analyte
		not detected at the value following.	This datum supercedes
		the listed Reporting Limit.	- ;

Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).

ICVS : Initial Calibration Verification Standard (External Standard).

mean : Average; sum of measurements divided by number of measurements.

mg/Kg (ppm): Concentration in units of milligrams of analyte per kilogram of sample,

wet-weight basis (parts per million).

mg/L : Concentration in units of milligrams of analyte per liter of sample.

mL/L/hr : Milliliters per liter per hour.

MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.

N/A : Not applicable.

NA : Not analyzed.

ND : Not detected; the analyte concentration is less than applicable listed

reporting limit.

NTU : Nephelometric turbidity units.

RPD : Relative percent difference, 100 [Value 1 - Value 2]/mean |value.

SNA : Standard not available.

ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample,

wet-weight basis (parts per billion).

ug/L : Concentration in units of micrograms of analyte per liter of sample.

umhos/cm : Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

 $\underline{\rm SM}$: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

roject: 450203 +4 coler received on: 21505 a	nd checked on ala	Log No: 52	
40/2	XIII	atury)	
'ere custody papers present?	i 	YES) ио
'ere custody papers properly fi	lled out?	······································	NO
Pere the custody papers signed?		YES	ИО
as sufficient ice used?		······································	NO
id all bottles arrive in $god_{\vec{q}}$	condition (unbroke	n)?YES	No temp U.S
oid bottle labels match COC?		YES	ио 🗁
ere proper bottles used for an	alysis indicated?.	YES	ИО
correct preservatives used?		······································	ИО
OA vials checked for headspace Note which voas (if any		······································	NO :
ample descriptor:	Number of vials:		
			:
			•
			1
			1
All VOAs with headspace bubbles used for analysis	s have been set as	ide so they wi	ll not be NO
ist here all other jobs receive	ed in the same coo	ler:	
lient Job #	NET log #		•
,			

(coolerrec)